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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/996,946

11/30/2001

Taeko Hayase

0445-0313P

3991

2292 7590 03/28/2008  
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EXAMINER

COLE, ELIZABETH M

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

03/28/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 09/996,946	<b>Applicant(s)</b> HAYASE ET AL.	
	<b>Examiner</b> Elizabeth M. Cole	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9,11,14,15,18-20 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4,6-9,11,14,15,18-20 and 22-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 9, 14-15, 18, 22-25 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-212866 in view of JP 10-273884 and further in view of Textile Glossary definition of cellulosic fibers. JP '866 discloses an airlaid nonwoven comprising thermoplastic fibers having a length of 3-25 mm, a fineness of 0.5-50 denier and a crimp number of 5-30. The fibers may be conjugate fibers. The fibers are present in an amount of from 3-50%. The airlaid nonwoven further comprises 50-97% of cellulosic fibers. See page 6. The nonwoven may be bonded at the crossover points. See pages 29-30. JP '866 is silent regarding the number of tips of the thermoplastic fibers which are exposed on the surface. However, since JP '866 teaches the same fabric which is made by the same method as the instant fabric and which comprises the same components in the same amounts, it is reasonable to presume that JP '866 would have the same number of tips, since the specification teaches that the tips are provided by forming the material by the particular method and with the particular materials claimed. JP '866 teaches at page 31 that the airlaid nonwoven disclosed by JP '866 can be laminated to another layer such as a cellulosic fabric such as wool, silk, linen or cotton, or to a paper layer. These layers correspond to the claimed liquid retentive sheet. JP '866 differs from the claimed invention because JP '866 does not teach incorporating thin fibers into the wipe, (although JP '866 does teach fusion bonding the conjugate fibers at crossover points, which corresponds to the limitation regarding the fusion bonding of the thick fibers). JP '844 teaches an absorptive

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nonwoven fabric which comprises fiber A and fiber B. The fibers can comprise polyester fibers and can be in the form of sheath/core conjugate fibers. See paragraph 0023. JP '844 teaches that each of fibers A and B can be different deniers and that the particular denier can be chosen in view of the properties which are desired in the finished product. For example, employing a finer fibers such as fibers having a denier of 0.5-6 denier improves the absorptivity of the fabric. The fibers have a length of 3-30mm which encompasses the claimed length. See paragraphs 0026-0027. Therefore, the prior art teaches all the claimed elements. The combination of the known elements by known methods to yield predictable results renders the claimed invention obvious. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a second fiber having a denier of 0.5-6 in the fabric of JP '866, in view of the teaching of JP '844 that fibers can be mixed in nonwoven wipes and that the properties of the wipe can be changed depending on the denier of the fibers employed. The fiber size of 0.6-5 denier would encompass the claimed fineness of 1-5 dtex. With regard to claim 21, JP '866 teaches 50-97% cellulosic fibers. With regard to claims 22-23, it is noted that JP '866 teaches employing cellulosic fibers. As set forth in the attached Textile Glossary, examples of cellulosic fibers are cotton and regenerated cellulose or rayon. Therefore, since JP '866 teaches cellulosic fibers broadly, then the use of any of the particular types of cellulosic fibers would have been obvious to one of ordinary skill in the art.

3. With regard to the amendment to the claims reciting that the second fabric layer is an airlaid layer, JP '866 teaches that the airlaid layer can be combined with a second

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nonwoven fabric. JP '866 further teaches the airlaid fabrics have improved bulk and hand as compared to carded or wet laid nonwovens. See paragraphs 0003, 0038.

Therefore, since airlaid nonwovens are known in the art and are taught by JP '866 as having superior bulk and hand as compared to other types of nonwovens such as wetland or carded nonwovens, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed an airlaid nonwoven as the additional layer to which the nonwoven of JP '866 is bonded, as taught at page 31 of the translation. With regard to the amount of thick and thin fibers, since JP '866 teaches fibers which correspond to the claimed thick fibers and JP '844 teaches mixing fibers having different deniers, such as those corresponding to the claimed thin fibers, in order to arrive at a fabric having the desired properties, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the mixture of thick and thin fibers through the process of routine experimentation in order to arrive at a fabric having the desired properties.

4. Claims 2 and 11, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-212866 in view of JP 10-273884 as applied to claims 1, 9-10, 14-15, 18, 22-23 above, and further in view of WO 01/52713 to Kakiuchi et al as set forth in the previous action. With regard to claim 19-20, WO '713 teaches a detergent comprising an electrolyte which is applied to wipes.

5. Claims 3-4, 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-212866 in view of either of JP 10-273884 as applied to claims 1, 9-10, 14-15,

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18, 22-23 above, and further in view of Kobayashi et al, EP 926,288 as set forth in the previous action.

6. Applicant's arguments filed 1/10/08 have been fully considered but are not persuasive.

7. Applicant argues that the conventional heat fusible fibers do not exhibit high strength of thermal bonding to cellulosic fibers, since synthetic resins have a low affinity to cellulose and that the heat fusible fiber of the reference is characterized by high strength of thermal bonding to cellulosic fibers, while in contrast JP '866 is characterized by the use of a special heat-fusible bicomponent fiber having high affinity to cellulose. This argument is not fully understood as written. It appears that the statement that the "heat fusible fiber of the reference" might refer to the claimed invention and that is how the examiner is interpreting this argument, i.e., that JP '866 is using a bicomponent fiber while the instant invention uses a fusible fiber having high affinity to cellulose. However, the claims do not recite anything about the degree of bonding or the affinity of the bonding agent or fiber for cellulose and do not preclude the use of bicomponent fibers, which are by definition heat fusible fibers.

8. Applicant argues that the references do not teach the use of thick and thin fibers in combination, together with cellulosic fibers in the manner claimed. However, JP '866 teaches the claimed invention except for the use of thin fibers. JP '844 teaches that the different fiber deniers can be combined in wiping fabrics in order to control the properties of the fabrics. For example including thinner fibers which correspond to the

claimed thin fibers, improves the absorptivity of the fabric. Therefore, the references as combined do teach mixing thick and thin fibers to control the properties of the fabric.

9. Applicant argues that claim 1 is amended to recite that the liquid retentive sheet is an airlaid fabric. JP '866 teaches that the airlaid layer can be combined with a second nonwoven fabric. JP '866 further teaches the airlaid fabrics have improved bulk and hand as compared to carded or wet laid nonwovens. See paragraphs 0003, 0038. Therefore, since airlaid nonwovens are known in the art and are taught by JP '866 as having superior bulk and hand as compared to other types of nonwovens such as wetland or carded nonwovens, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed an airlaid nonwoven as the additional layer to which the nonwoven of JP '866 is bonded, as taught at page 31 of the translation. Applicant argues that claim 1 is amended to recite that at least 50% of the fibers are thick fibers. However, since JP '866 teaches fibers which correspond to the claimed thick fibers and JP '844 teaches mixing fibers having different deniers, such as those corresponding to the claimed thin fibers, in order to arrive at a fabric having the desired properties, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the mixture of thick and thin fibers through the process of routine experimentation in order to arrive at a fabric having the desired properties.

10. Applicant argues that attached declaration shows that the carded fabric of JP '844 differs from the air laid liquid retentive sheet of the claimed invention. These arguments are addressed below in the discussion of the declaration.

11. The Declaration under 37 CFR 1.132 filed 1/10/08 is insufficient to overcome the rejection of claims based upon JP '866 in view of JP '844 as set forth in the last Office action because: the Declaration is not commensurate in scope with the teachings of JP '844 because JP '844 does not require or teach spunlacing the carded sheet as the only method of combining but also teaches ultrasonic heating, hot air treatment, etc., which are known to prevent compaction and reduction of the bulk of the fabric. Further, with regard to the airlaid fabric, as noted above, JP '866 teaches benefits which can be obtained by using airlaid fabrics as opposed to carded fabrics. Finally, the showing set forth in the declaration is not commensurate in scope with the claims and does not compare fabrics made over the full range of the independent claim with fabrics outside the claimed range. The declaration does not establish the criticality of the claimed ranges. JP '844 teaches mixing fiber denier in order to control the properties of the resulting fabric. The evidence set forth in the declaration does not establish that the claimed values produce an unexpected result. .

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794

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